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times square convention center

truck analysis

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TIMES SQUARE CONVENTION CENTER
TRUCK ANALYSIS

for

Regional Plan Association
235 E. 45th Street
N.Y.C.,N.Y.

Raymond, Parish, Pine & Weiner, Inc.

July 1977

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Transportation Planning Group
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lliam R. McGrath, P.E.
Director

July 28, 1977

Mr. John Keith, President
Regional Plan Association
235 E. 45th Street
New York, New York 10017

Dear Mr. Keith:

We are please to transmit our analysis of truck traffic for the proposed Times Square Convention Center. During the past few weeks we have reviewed traffic and environmental assessments for convention center proposals in New York City as well as other parts of the country. We also have accumulated midtown traffic data, and have had several informative conversations with convention center managers to obtain operational insights that otherwise might be overlooked.

These analyses clearly show that trucks generated by the proposed facility would have a negligible impact on midtown traffic flow. Similarly, the differences between travel time to any locations in New York City are negligible compared to the total time required to transport and set up exhibits. We have concluded however, that direct access between the street and exhibition levels is essential, and we have recommended several feasible ramping schemes.

In conclusion, we would like to express our appreciation to Pomerance and Breines, and to Regional Plan Association for providing us with a substantial amount of the background information used in the study. We have enjoyed this challenging assignment, and look forward to working with you again.

Very truly yours,

William R McGrath

William R. McGrath
Director

WRM:bac
Enclosure

Division of Raymond, Parish, Pine & Weiner, Inc., with other offices at Hamden, Conn.; Washington, D.C., Philadelphia, Pa., Harrisburg, Pa.; Princeton, N.J.

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I. INTRODUCTION

The proper location and design of a New York City Convention and Exhibit Center has been under study for a number of years. Various locations have been considered and evaluated. The five sites that have received most serious study are:

1. On the Hudson River at 44th Street;
2. the 34th Street railroad yard between 11th and 12th Avenues;
3. Battery Park City;
4. the block adjacent to and north of the Coliseum;
5. Times Square.

The latter location originally was proposed by the Regional Plan Association in April, 1976. Their proposal offered two optional locations in the Times Square area; one between 7th and 8th Avenues from 40th to 43rd Streets, and other between 6th and 7th Avenues from 42nd to 47th Streets.

A preliminary multi-use site plan for the 6th to 7th Avenues site was developed by architects Pomerance and Breines. There would be 562,000 square feet of mezzanie level exhibition space plus meeting rooms, dining facilities, a street level shopping arcade, a ten acre recreation deck and several 40-story hotel and apartment towers.

No detailed site plan has been developed for the 7th to 8th Avenues sites, however a convention center on that site would also require a mezzanine level exhibit area and

could have approximately the same features and dimensions as the other site. In January 1977, the New York Telephone Company commissioned Vollmer Associates to evaluate the preliminary site plan for the Times Square Convention Center. The Vollmer report noted that the site could not be equalled by any other location in New York City in respect to its proximity to public transit, hotels, restaurants, theaters and shopping areas. It conceded the site's obvious superiority in accessibility and amenities available to Convention Center visitors.

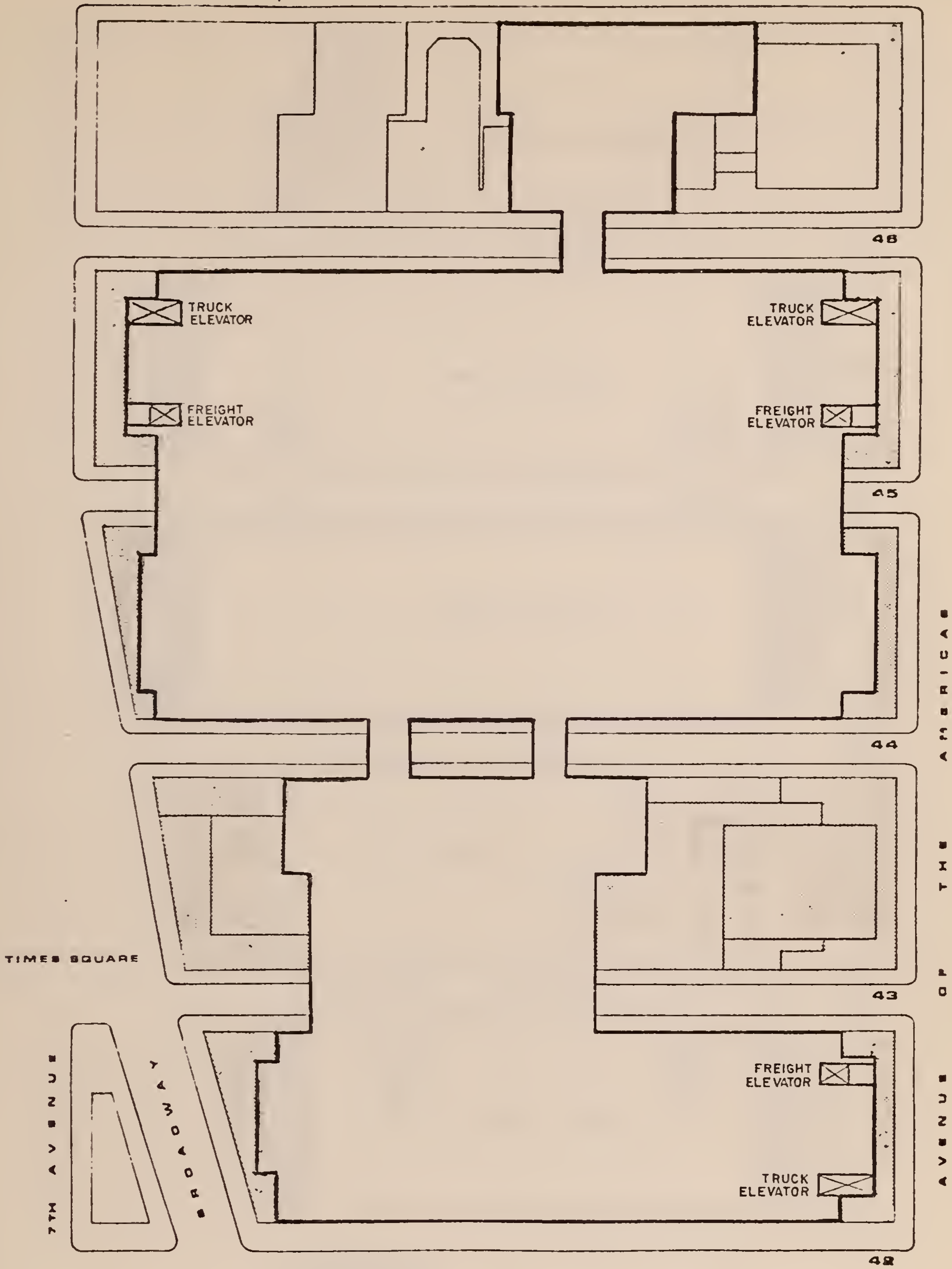
Other sections of the report conclude, however, that truck access to the site was quite difficult, and that the truck processing accommodations shown in the preliminary sketches had serious deficiencies. For this reason it was decided that the potential truck operation problems of the Times Square site should be examined more carefully to determine if they could be alleviated to the extent that they would not outweigh the many advantages of the location. Accordingly, Regional Plan Association retained the Transportation Planning Group of Raymond, Parish, Pine & Weiner, Inc. to evaluate the impact of convention center trucks on the midtown Manhattan street system, and to examine the need for and feasibility of improving the on-site truck processing accommodation. Subsequent pages of this report describe their analyses and conclusions.

II. SITE PLAN

The Pomerance and Breines site plan for the New York City Convention and Exhibition Center includes 562,000 square feet of exhibit space divided into three areas as shown in Figure 1. The floor of the exhibit level would be twenty-five feet above the street. The street level plan, shown in Figure 2, includes 405,800 square feet of mid-block retail space plus entrance lobbies for the exhibit areas and the adjacent hotel/apartment towers. The retail and exhibit space would be serviced by sub-surface areas as shown in Figure 3.

In the Pomerance and Breines plan, two sub-surface areas serve the exhibit level. The larger of these, between 45th and 46th Streets, includes twenty-four truck berths with access ramps to and from 45th Street. The smaller area, between 42nd and 43rd Streets, includes eighteen truck berths with access ramps to and from 43rd Street. Both sub-surface areas include elevators to transfer exhibits to the mezzanine level exhibition space.

Since many large exhibits are an integral part of the trailers that transport them, the plan includes three freight elevators large enough to accommodate over the road trailers. In operation, trucks would enter the sub-surface level, and be backed into the elevator.

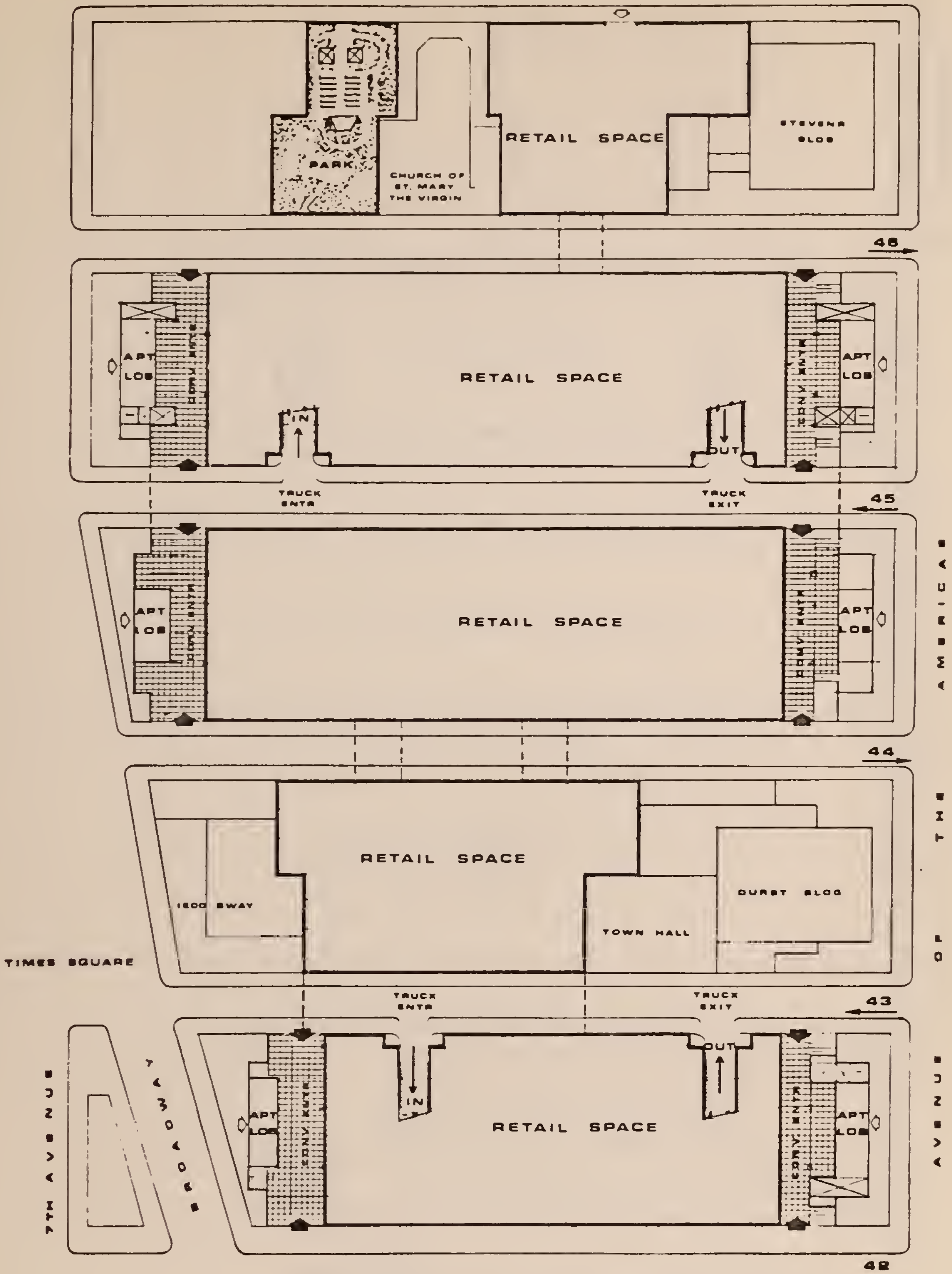

TRUCK ELEVATOR
FREIGHT ELEVATOR
TRUCK ELEVATOR
FREIGHT ELEVATOR
FREIGHT ELEVATOR
TRUCK ELEVATOR
46
45
44
43
42
TIMES SQUARE
7TH AVENUE
BROADWAY
AVENUE OF THE AMERICAS
AVENUE

PROPOSED
TIMES SQUARE CONVENTION CENTER

EXHIBIT LEVEL - 562,000 SQ. FT.

PLAN DEVELOPED BY
POMERANCE & BREINES, ARCHITECTS P.C.

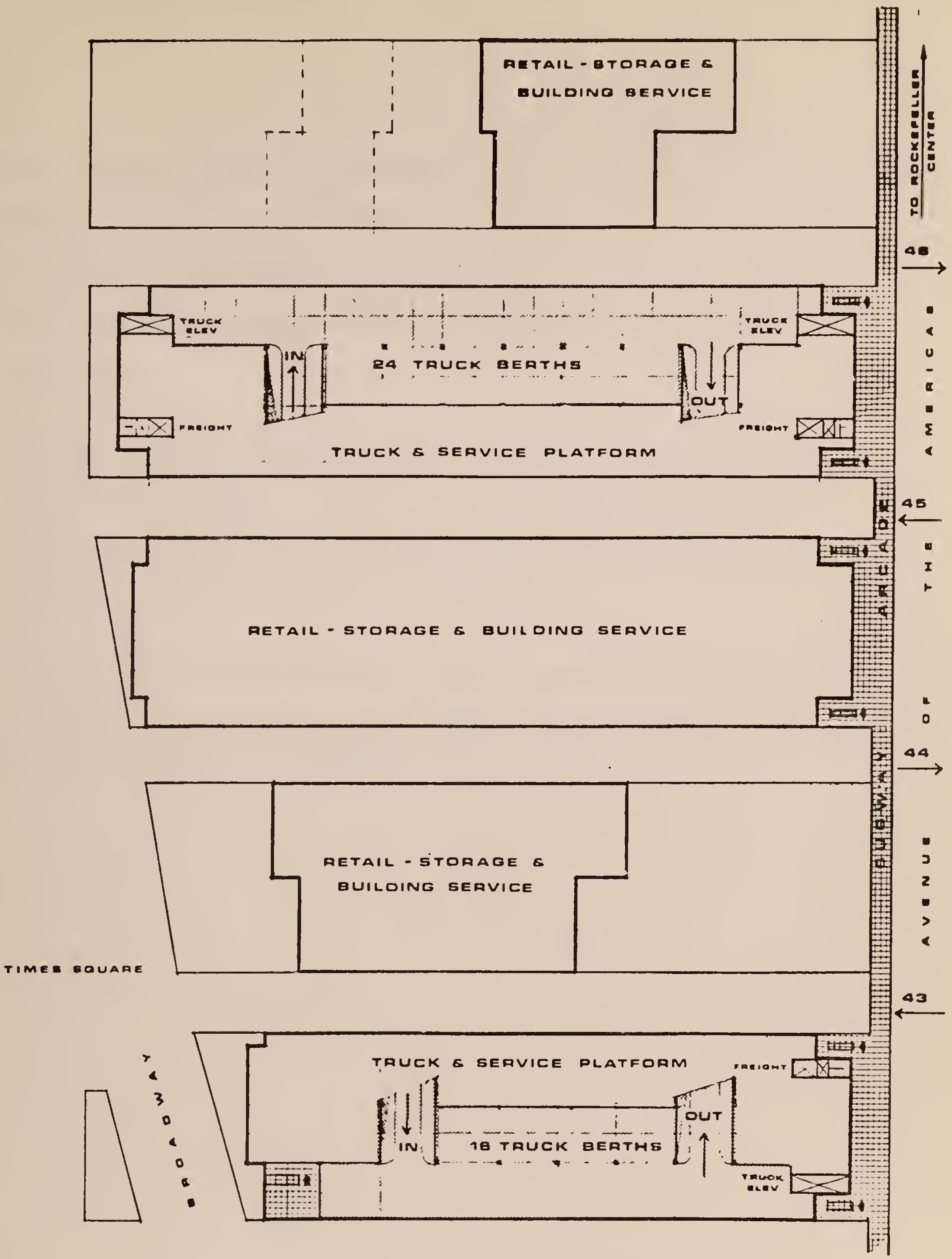
FIGURE 1


PARK
CHURCH OF ST. MARY THE VIRGIN
RETAIL SPACE
STEVENS BLDG
46
APT LOB
CONV ENTR
RETAIL SPACE
IN
OUT
CONV ENTR
APT LOB
TRUCK ENTR
TRUCK EXIT
45
APT LOB
CONV ENTR
RETAIL SPACE
CONV ENTR
APT LOB
AVENUE OF THE AMERICAS
44
RETAIL SPACE
1500 BWAY
TOWN HALL
DURST BLDG
TIMES SQUARE
TRUCK ENTR
TRUCK EXIT
43
7TH AVENUE
BROADWAY
APT LOB
CONV ENTR
IN
RETAIL SPACE
OUT
CONV ENTR
APT LOB
AVENUE
42

PROPOSED
TIMES SQUARE CONVENTION CENTER
STREET LEVEL - RETAIL - 405,800 SQ. FT.

PLAN DEVELOPED BY
POMERANCE & BREINES, ARCHITECTS P.C.

FIGURE 2


RETAIL - STORAGE & BUILDING SERVICE
TO ROCKEFELLER CENTER
46
TRUCK ELEV
TRUCK ELEV
IN
24 TRUCK BERTHS
OUT
FREIGHT
FREIGHT
TRUCK & SERVICE PLATFORM
45
AVENUE OF THE AMERICAS
SUBWAY ARCADE
RETAIL - STORAGE & BUILDING SERVICE
44
RETAIL - STORAGE & BUILDING SERVICE
TIMES SQUARE
43
BROADWAY
TRUCK & SERVICE PLATFORM
FREIGHT
IN
18 TRUCK BERTHS
OUT
TRUCK ELEV

PROPOSED
TIMES SQUARE CONVENTION CENTER
SUB-SURFACE LEVEL

PLAN DEVELOPED BY
POMERANCE & BREINES, ARCHITECTS P.C.

FIGURE 3

The tractor would be separated from the trailer and depart. The trailer would be elevated to the exhibit level and maneuvered into position by electric donkeys. The reverse procedure would be followed for removing exhibits.

Trucks carrying smaller loads would be unloaded at the sub-surface docks. Dollys and fork lift trucks would be used to hoist their cargoes up to the exhibit floor level on standard freight elevators.

Special provisions would be made for hoisting over size loads directly from street level into a special opening in the building at exhibit floor level.

III. POTENTIAL TRUCK OPERATIONS PROBLEMS

Vollmer Associates analyzed the Times Square site plan and concluded that the inability to drive trucks directly onto the exhibit level is one of the plan's most serious deficiencies. If the arrival rate of trucks requiring access to the exhibit level approached the processing rate of the elevators, and if available truck berths were occupied, then queues could develop. According to the report, "the reliance on elevators would require that the set-up and take-down of major shows be coordinated with unusual precision. Since it is anticipated that two out of every three trucks would be arriving over the road, (i.e. outside the Metropolitan area and from distant states) such coordination is probably impossible under the current scheme. The result of this would be that trucks would end up waiting on 43rd Street, 45th Street and Sixth Avenue to enter the Convention Center thus causing a great deal of congestion in the area."

Vollmer Associates considered a system of ramps that could be used in lieu of or in addition to the elevators. However the report concluded that the ramp configurations "preempt street level and convention floor space, while, at the same time limit access to each hall to a single point requiring maneuvering on the hall floor which reduces the efficiency of set-up and take-down." .

Finally, the report suggested that the volume of trucks going to or coming from the convention center could have a significant adverse impact on midtown Manhattan traffic flow.

IV. TRUCK TRAFFIC ANALYSIS

Trucks generated by the convention center can be categorized by purpose as those that make deliveries to or service the residential, office, retail and other non exhibit uses, and those that serve the exhibition space. Each category of trips has different time and geographic trip distribution characteristics and consequently must be analyzed separately.

NON-EXHIBIT TRUCK TRIPS

The Vollmer analysis reported that retail uses generate 50 to 100 truck trips per 100,000 square feet of floor area per day. Studies in lower Manhattan and in downtown Brooklyn show truck generation rates within this range. Therefore, the street level retail uses could be expected to generate between 200 and 400 truck trips per day. However the proposed convention center site currently is occupied by 222 businesses including 96 retail stores, 75 restaurants, 13 hotels and 12 theaters. Although truck generation rates vary with different types of retail uses, there is nothing to suggest that the proposed retail uses will generate significantly more truck trips that the existing uses. Consequently, there is no reason to anticipate a significant increase in truck traffic on local streets as a result of the street level retail activity.

EXHIBIT TRUCK TRIPS

Trade shows will attract the greatest number of trucks to the exhibit hall. These shows generally start on Sunday or Monday and last from three to seven days. The environmental impact statement for the 44th Street site estimated that a modern New York City Convention and Exhibition Center could attract ten major shows from the Coliseum plus seventeen major shows that currently avoid New York because of facility constraints. This estimate of 27 major trade shows is comparable to the twenty-six attracted annually to the McCormick Place convention center in Chicago. Thus the trade show truck attraction pattern would be imposed upon the city between two or three times each month.

Public shows attract approximately half as many truck trips as trade shows. In 1966, the McCormick Place convention center attracted eight public shows that lasted from three to ten days each.

Meetings and theater performance are scheduled almost continuously in major convention centers, but these events attract very few trucks.

Trade shows in convention centers are routinely separated by at least two or more free days to facilitate set-up and take-down activities. In fact, twenty of the twenty-six trade shows at McCormick Place

were separated by at least three days. However, the 1966 McCormick Place data show that on three occasions small trade shows were scheduled immediately after or before small public shows. It appears these smaller shows can be accommodated on consecutive days without the benefit of a buffer for set-up and take-down.

Peak Truck Generation Periods - The peak periods of truck flow at a convention center occur during a two or three day period during the week prior to the start of a show, and during the day or two after the end of a show. Thus a trade show that commenced on Sunday would attract the greatest truck volumes on the previous Thursday and Friday.

The environmental impact statement for the 44th Street convention center location indicates that trucks would be attracted between 8:00 A.M. and 10:00 P.M. on the peak days. The attraction rate during the evening hours would be considerably less than the rate earlier in the day. About ten percent of the daily truck traffic could be expected to arrive during the street peak hour. The resultant percentage distribution pattern of trucks arrivals on the peak day could be expected to approximate the pattern shown in Table 1.

TABLE 1
PERCENTAGE DISTRIBUTION OF TRUCK ARRIVALS

Time	%
8 - 9	10
9 - 10	9
10 - 11	8
11 - 12	8
12 - 1	6
1 - 2	7
2 - 3	8
3 - 4	9
4 - 5	10
5 - 6	10
6 - 7	6
7 - 8	4
8 - 9	3
9 - 10	2
	100%

Peak Truck Generation Volumes - Estimates of the volume of trucks to be generated by a New York City Convention Center on a peak day vary from 125 (Travers Associates in a study for the New York City Convention and Exhibition Center Corporation) to 400 (URS/Madigan - Praeger in a study for the New York City Transportation Administration). The management of McCormick Place and the management of the Coliseum have indicated that the large trade shows will attract a maximum of 300 to 400 trucks, most of which will arrive during the two or three days prior to the final set-up. This suggests that the Travers Associates estimate is more realistic, and that under the worst conditions the peak volume will not exceed 200 trucks per day. With a minimum amount of coordination, the convention center truck traffic could be held between the 125 and 150 trucks per day estimated by Travers. However assuming that the worst possible case does prevail, the convention center migh attract 200 trucks on the peak days, which would be 20 trucks during the peak hours of those days.

Geographic Truck Distribution Pattern - Approximately 70 percent of the convention center trucks will originate outside the New York City area. Eighty percent of these, or 56 percent of the total, will come from areas west of the Hudson River. Most of these will enter Manhattan via the Lincoln Tunnel, but a significant percentage will use the Holland

Tunnel. The remaining 20 percent of the over the road trucks, 14 percent of the total, will originate east of the Hudson River and will enter the Manhattan via the Queens-Midtown Tunnel, the Queensboro Bridge or the Brooklyn-Battery Tunnel.

About 30 percent of the trucks will originate at metropolitan area locations. These include auxiliary service vehicles, such as suppliers of food and cleaning materials, and trucks carrying exhibits from industrial areas in the New York Region. About 80 percent of these, 24 percent of the total, will come from the Bronx, Brooklyn or Queens via one of the East River or Harlem River crossings. Twenty percent of these local trucks, six percent of the total, will come from New Jersey via the Holland or Lincoln Tunnel.

The cumulative distribution pattern of trucks traveling to the convention center indicates that 38 percent of the trucks will cross the East and Harlem Rivers, and 62 percent will cross the Hudson River. The number originating in Manhattan will be too small to be of concern.

Assignment of Generated Trucks - The two Times Square locations suggested by Regional Plan Association are almost adjacent to each other. Consequently, the truck travel patterns will differ only in close proximity to the sites. The location between 6th and 7th Avenues appears to offer slightly greater truck access problems because the trans-Hudson trucks would have to travel further on

midtown streets. Therefore, the assignment was carried out in detail for the more westerly location. The conclusions of the analysis, however, apply equally, or nearly so, to both sites.

Convention Center truck trips were assigned on the basis of the distribution pattern described in the proceeding section, and on the location of Times Square relative to the highway and street system. In practice, this assignment is determined mostly by dispatchers who are responsible for prescribing the fastest and least restrictive route plan to the drives under their jurisdiction, many of whom will be strangers to the area. It is estimated that 50 percent of the trucks will use the Lincoln Tunnel, 12 percent will use the Holland Tunnel, eight percent will use the Brooklyn-Battery Tunnel, 16 percent will use the Queens-Midtown Tunnel and 14 percent will use the Queensboro Bridge. Other crossings will be used so lightly to be insignificant. Inbound trucks that use the Lincoln Tunnel can be expected to travel north on Dyer Avenue to either 41st or 42nd Streets. They would have two options: (1) they could go west on 41st or 42nd Streets to 10th Avenue, then north to 44th or 46th Streets then east to the convention center site; or (2) they could go east on 42nd Street to Eighth or Sixth Avenues, then north to the appropriate streets serving the convention center. Although the eastbound 42nd Street route is shorter, trucks cound encounter significant delays attempting to turn lest across opposing 42nd Street

traffic. Therefore it is assumed that most trucks coming from the Lincoln Tunnel would take the slightly longer route.

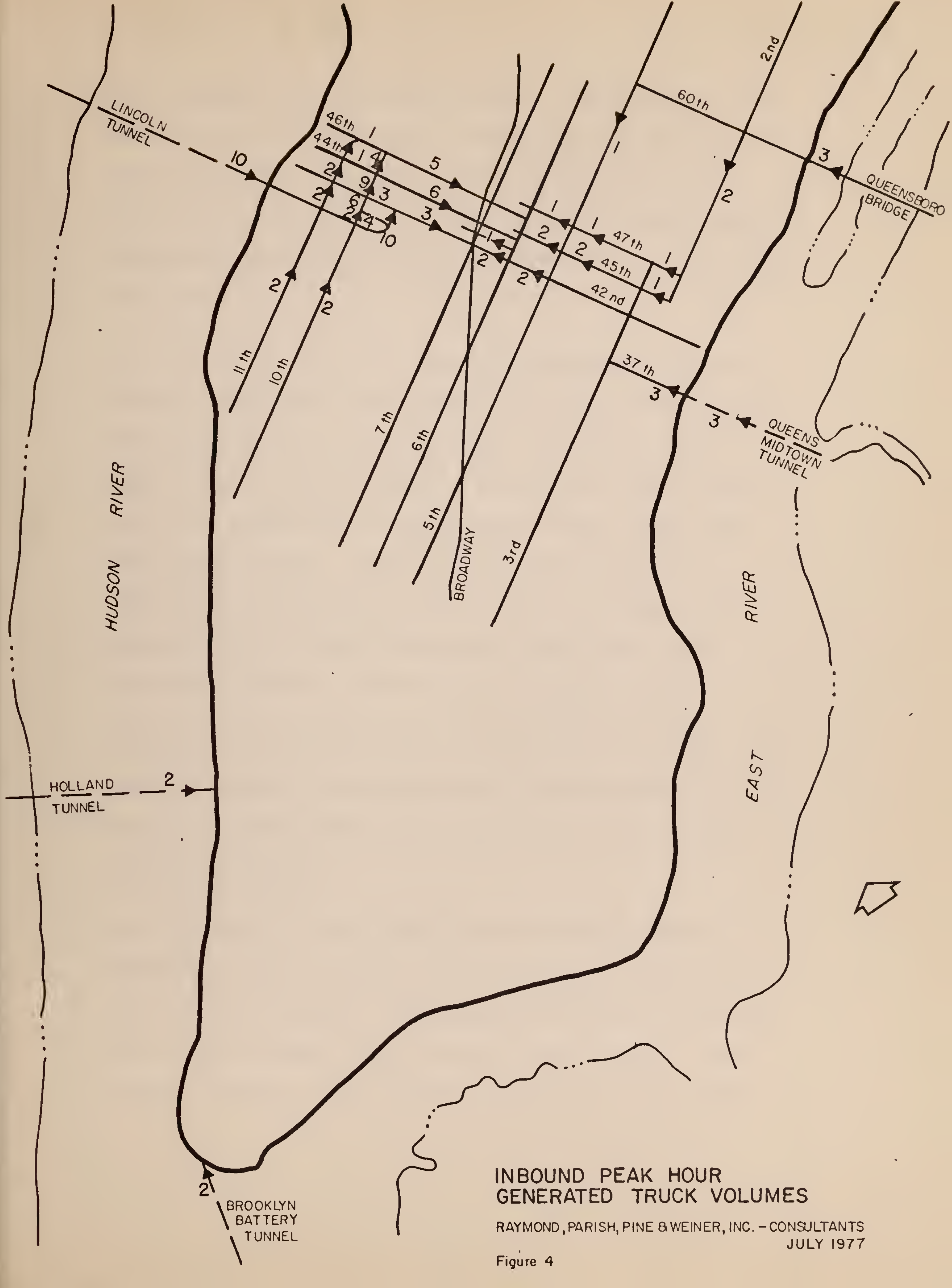
Trucks coming from the Holland Tunnel or the Brooklyn-Battery Tunnel would travel north on the west side to the appropriate eastbound street serving the convention center.

Most inbound trucks that cross the Queensboro Bridge would travel south on Second Avenue to 45th or 47th Streets then west to vicinity of the proposed center. However some of the trucks crossing the Queensboro Bridge would travel west on 60th Street to Fifth Avenue then south to the appropriate street serving the convention center.

Finally, inbound trucks from the Midtown Tunnel probably would travel north on Third Avenue, then west on either 42nd or 45th Streets.

Outbound trucks would follow the same pattern, but would be assigned to different streets due to the one-way system.

The number of peak hour trucks that correspond to the percentage distribution and assignment described above is shown in Figures 4 and 5. Figure 4 shows that the highest inbound peak hour generated truck volumes would be ten trucks on Dyer Avenue between the Lincoln Tunnel exit and 41st Street. Tenth Avenue would carry two additional trucks south of 41st Street, six between 41st and 42nd Streets, nine between 42nd and 44th Streets and


LINCOLN TUNNEL
10
46th
44th
1
1 4
5
2
9
3
6
2
6
2 4
3
10
2
2
11th
10th
7th
6th
5th
BROADWAY
3rd
2nd
60th
1
2
3
QUEENSBORO BRIDGE
1
1
1
2
2
47th
1
2
2
45th
2
1
42nd
37th
3
3
QUEENS MIDTOWN TUNNEL
HUDSON RIVER
EAST RIVER
HOLLAND TUNNEL
2
2
BROOKLYN BATTERY TUNNEL

INBOUND PEAK HOUR
GENERATED TRUCK VOLUMES

RAYMOND, PARISH, PINE & WEINER, INC. – CONSULTANTS
JULY 1977

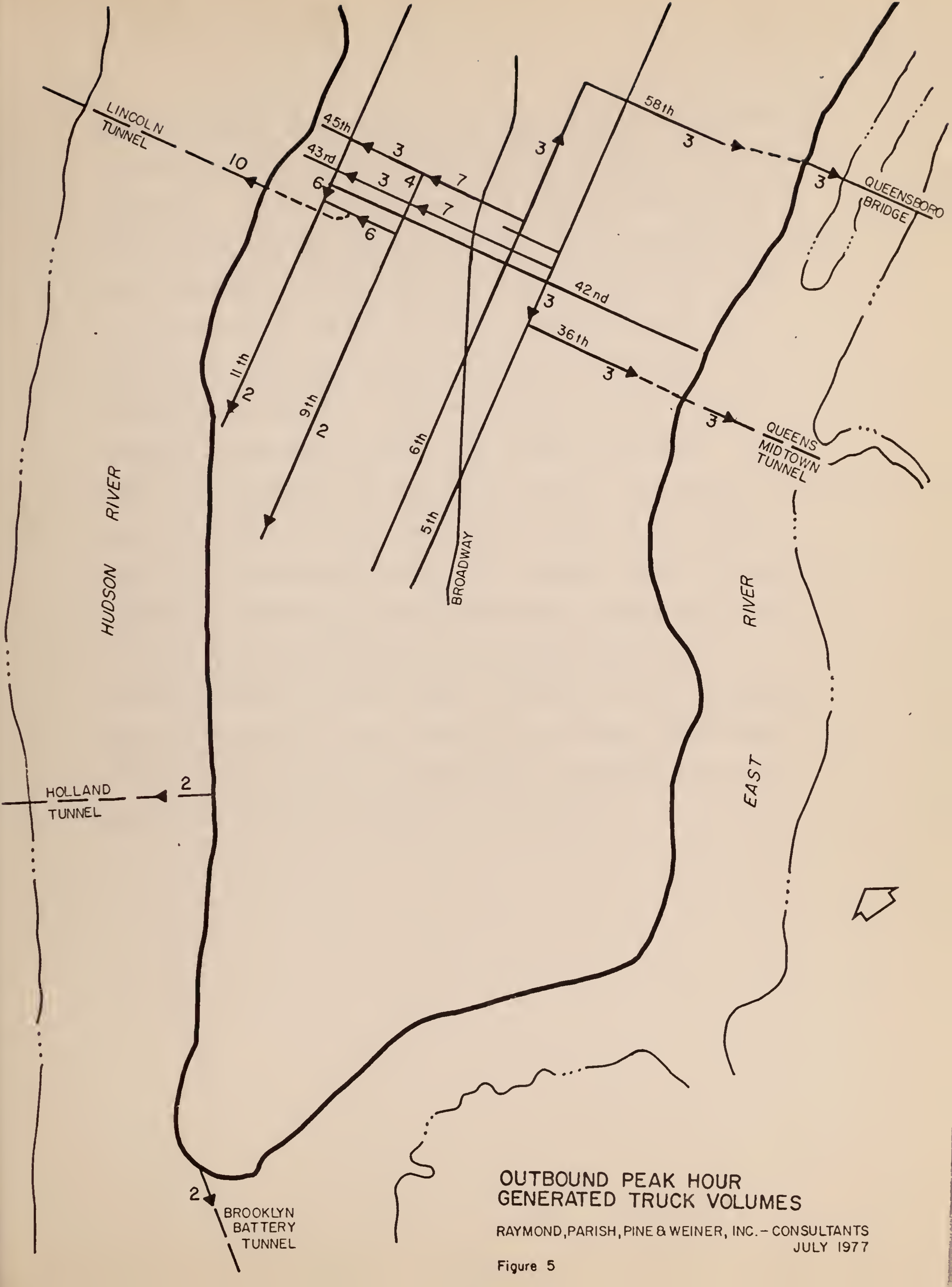
Figure 4

four between 44th and 46th Streets. Forty-sixth Street would carry five additional trucks east of Tenth Avenue, and 44th Street would carry seven additional trucks east of Tenth Avenue. No other Street or Avenue would carry more than four additional inbound trucks during the peak hour.

Figure 5 shows that the outbound volumes would be of a similar magnitude. Forty-Third and Forth-Fifth Streets each would carry seven additional trucks from Times Square west to Ninth Avenue. Forty-First Street would carry six additional trucks between Ninth Avenue and the Lincoln Tunnel. Ninth Avenue would carry six additional trucks between 43rd and 41st Streets. No other Street or Avenue would carry more than four additional outbound trucks during the peak hour.

The only location where both inbound and outbound trucks would be additive would be on 41st street between 10th and Dyer Avenues where there would be a total of ten additional trucks.

The alternative Times Square location would attract eastbound trucks to 38th and 40th Streets rather than 44th and 46th Streets; and westbound trucks to 39th and 41st Streets rather than 43rd and 45th Streets. The volumes, however, would remain approximately the same.


LINCOLN TUNNEL
10
45th
3
43rd
3
4
7
6
7
6
58th
3
3
3
QUEENSBORO BRIDGE
42nd
3
36th
3
3
QUEENS MIDTOWN TUNNEL
11th
2
9th
2
6th
5th
BROADWAY
HUDSON RIVER
EAST RIVER
HOLLAND TUNNEL
2
2
BROOKLYN BATTERY TUNNEL

OUTBOUND PEAK HOUR
GENERATED TRUCK VOLUMES

RAYMOND, PARISH, PINE & WEINER, INC. – CONSULTANTS
JULY 1977

Figure 5

Another general consideration is the relative accessibility of either site as compared with others from the exhibitors viewpoint. Truck travel time is a cost that must be borne. Observation and experience inform us that throughout virtually all of Manhattan, north-south travel on the Avenues east of Lexington and west of Fifth is relatively good (by Manhattan standards)and cross town travel anywhere is relatively difficult. This burden falls on any site anywhere in Manhattan and is not readily avoidable. Sites that do not involve the financial district, Greewich Village, garment district and produce district have to be judged better than those that do in this regard. Central locations compare as favorably as edge locations, because avoidance of cross town travel from one side only tends to increase travel from the other. About the only conclusion that can be drawn is that there is not enough difference between sites anywhere in Manhattan to predominate in an exhibitor's decision to come to the show.

Impact of Trucks on Existing Traffic Flow - Exisitng P.M. peak hour traffic volumes on westside Streets and Avenues were obtained from studies conducted for the Westside Highway project. Automobile and truck volumes on blocks that would be affected by convention center trucks are listed in Tables 2 and 3. These tables clearly show that the anticipated additional truck volumes are very low compared to existing volumes. Consequently the generated trucks will have little or no effect on the quality of traffic flow on westside streets.

Current traffic volume data on eastside streets is unavailable. However the assignment shows that no eastside street will carry more than three additional trucks, and the resultant impact is certain to be negligible.

TABLE 2

PM PEAK HOUR STREET TRAFFIC VOLUMES

Street	Existing Volume Automobile	Trucks	Additional Value Trucks
41st			
Dyer - 10th	1200	180	4
42nd			
Dyer - 10th	850	50	3
Dyer - 9th	400	20	3
9th - 8th	350	20	3
8th - 7th	250	20	1
7th - Broadway	400	20	1
Broadway - 6th	300	20	1
44th			
11th - 10th	400	10	2
10th - 4th	150	10	7
9th - 8th	250	10	7
46th			
11th - 10th	300	10	1
10th - 9th	300	10	7
9th - 8th	400	10	5

TABLE 3

PM PEAK HOUR AVENUE TRAFFIC VOLUME

	Existing Volume		Additional Value
Street	Automobile	Trucks	Trucks
10th			
40th to 41st	750	210	2
41st to 42nd	1050	110	6
42nd to 43rd	1300	150	9
43rd to 44th	1400	150	9
44th to 45th	1650	150	4
45th to 46th	1700	150	4
11th n.b.			
40th to 41st	300	50	3
40st to 42nd	350	50	3
42nd to 43rd	450	50	3
43rd to 44th	450	50	3
44th to 45th	550	50	1
45th to 46th	600	50	1
6th n.b.			
40nd to 45th	2300	150	3
8th n.b.			
42nd to 43rd	1800	150	2
43rd to 44th	1500	140	2
44th to 45th	1750	150	1
45th to 46th	1800	150	1

V. ON-SITE TRUCK PROCESSING

The previous truck impact analysis presupposes a convention center that can accommodate trucks without generating queues. Vollmer Associates concluded that total reliance on elevators would create a potential for queues, and that these queues could cause a "great deal of congestion" on local streets.

From this analysis it appears that the potential for queues that would extend beyond the 43 truck berths planned for the sub-surface level is quite small. The cycle time for an elevator most likely would be considerably less than ten minutes, which corresponds to a processing rate of eighteen trucks per hour for the three elevators. This handling rate equals ninety percent of the anticipated peak arrival rate. Assuming a random arrival pattern which can be approximated by a Poisson Probability Distribution, and an average peak arrival rate of twenty trucks per hour, a reservoir space for fourteen trucks would be adequate 99 percent of the time. However, exhibit floor maneuvering and setting up sometimes may preclude the use of at least one elevator, thereby decreasing the processing rate. This situation would require the use of virtually all the planned 43 truck berths, and also could result in complicated jockeying of trucks within or between the sub-surface areas. Potentially, this could lead to some congestion. Thus, an operational procedure

could overide the expected conditions. Because of these potential operational problems when dependent upon elevators, most modern convention centers provide direct truck access to the exhibit floor. For this reason, the preliminary site plan for the Times Square Center was re-analyzed to determine the feasibility of providing ramp access to the mezzanine level.

Ideally the access system should provide ingress and egress in both the eastbound and westboud direction. Also, ramps should not intersect 42nd Street or the adjacent avenues due to their high traffic volumes. Additionally, ramp access at the mezzanine level should be designed to minimize dead space and to maximize the efficiency of exhibit floor truck maneuvering.

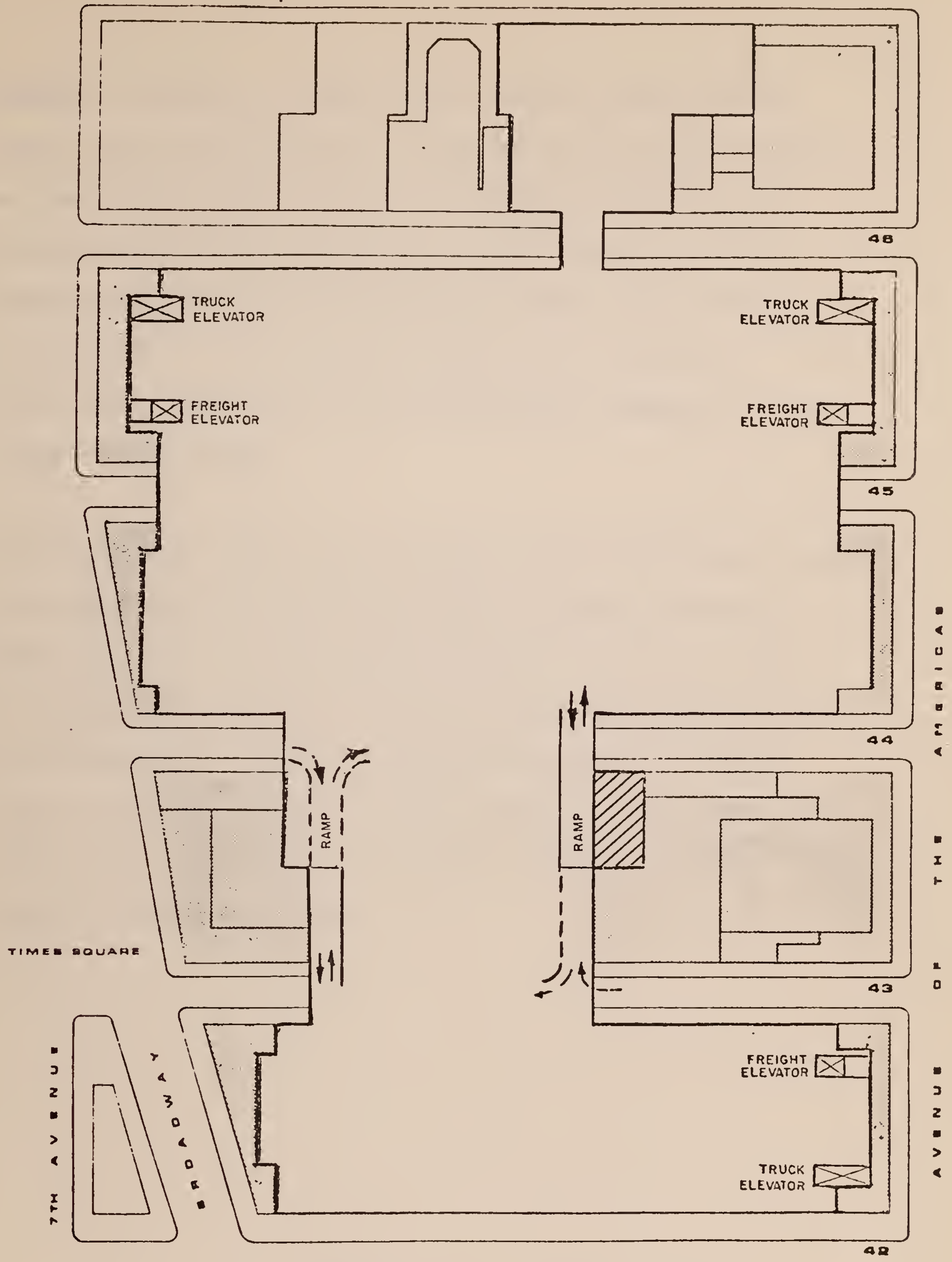
Truck ramps should be at least twelve feet wide for one-way access and twenty-four feet wide for two-way access. Grades should not exceed fifteen percent; thus, at least 167 feet would be required to ascend the 25 feet between the street and exhibit level.

The following schemes are among the several workable ramp systems that meet the criteria described above. These ramp schemes may be used alone or in conjunction with the sub-surface service arrangement previously described.

Scheme 1 (Figure 6) - This plan includes two-way ramps intersecting 43rd and 44th Streets at right angles. The ramp that would enter the large exhibition space would require widening the bridge over 44th Street, and would isolate some 5,000 square feet of dead space on the exhibit level east of the ramp.

Additional exhibit space could be provided by lengthening the crossing over 44th Street in the manner shown in Figure 6. The net usable floor space in the southern exhibit area would be unchanged. Trucks could enter and leave from a centrally located pont on the south edge of the large exhibit space, and from a similar point on the west edge of the smaller exhibit space.

Assuming that the floor structure is four feet deep, the bottom of this structure would be 21 feet above the street level. Thus, the ramps would have to ascend 21 feet in the 200 feet between street right-of-way lines. The resultant 10.5 percent grade is less that the maximum allowable described above.


46
TRUCK ELEVATOR
FREIGHT ELEVATOR
TRUCK ELEVATOR
FREIGHT ELEVATOR
45
44
RAMP
RAMP
TIMES SQUARE
43
AVENUE OF THE AMERICAS
7TH AVENUE
BROADWAY
FREIGHT ELEVATOR
TRUCK ELEVATOR
AVENUE
42

PROPOSED
EXHIBIT LEVEL ACCESS: SCHEME 1

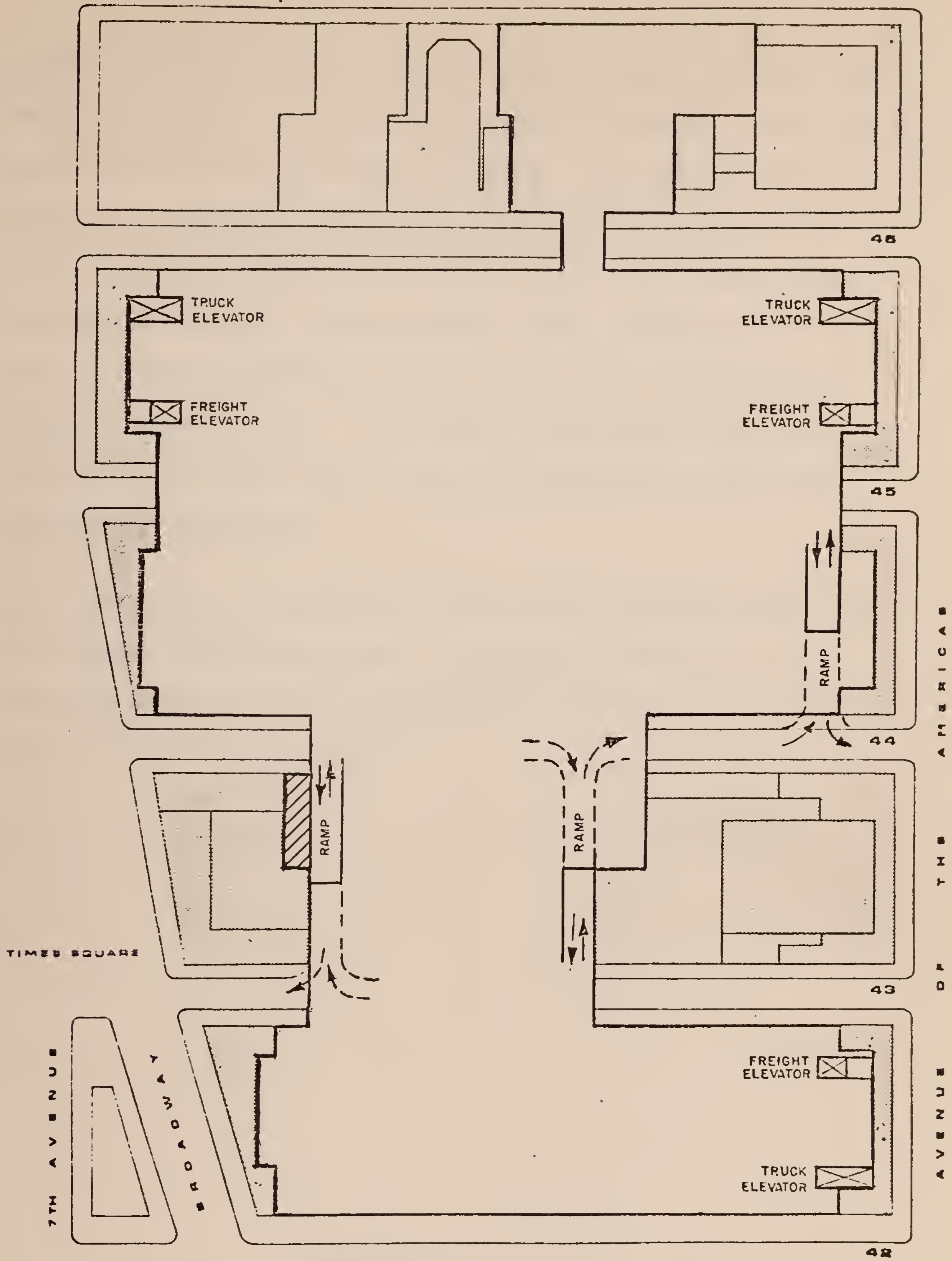
TIMES SQUARE CONVENTION CENTER

RAYMOND, PARISH, PINE & WEINER, INC. - CONSULTANTS
JULY 1977

FIGURE 6

Scheme 2 (Figure 7) - This plan includes three two-way ramps intersecting 43rd and 44th Streets at right angles. One ramp would enter the smaller exhibit space at the eastern edge of the bridge over 43rd Street. Another ramp would enter the large exhibit space at a centrally located point on the eastern edge of the building. The third ramp would enter the southwestern quadrant of the large exhibit area.

The additional ramp in this scheme would facilitate set-ups and take-downs in the large exhibit space, and would enable trucks to enter via eastbound streets and leave via westbound streets (or the reverse) thereby minimizing the excessive circulatory movements common to one-way street systems. However, this additional ramp would decrease the floor area in the large exhibit space by approximately 3,000 square feet.


46
TRUCK ELEVATOR
FREIGHT ELEVATOR
TRUCK ELEVATOR
FREIGHT ELEVATOR
45
RAMP
44
AVENUE OF THE AMERICAS
RAMP
RAMP
TIMES SQUARE
43
FREIGHT ELEVATOR
TRUCK ELEVATOR
7TH AVENUE
BROADWAY
42

PROPOSED
EXHIBIT LEVEL ACCESS: SCHEME 2

TIMES SQUARE CONVENTION CENTER

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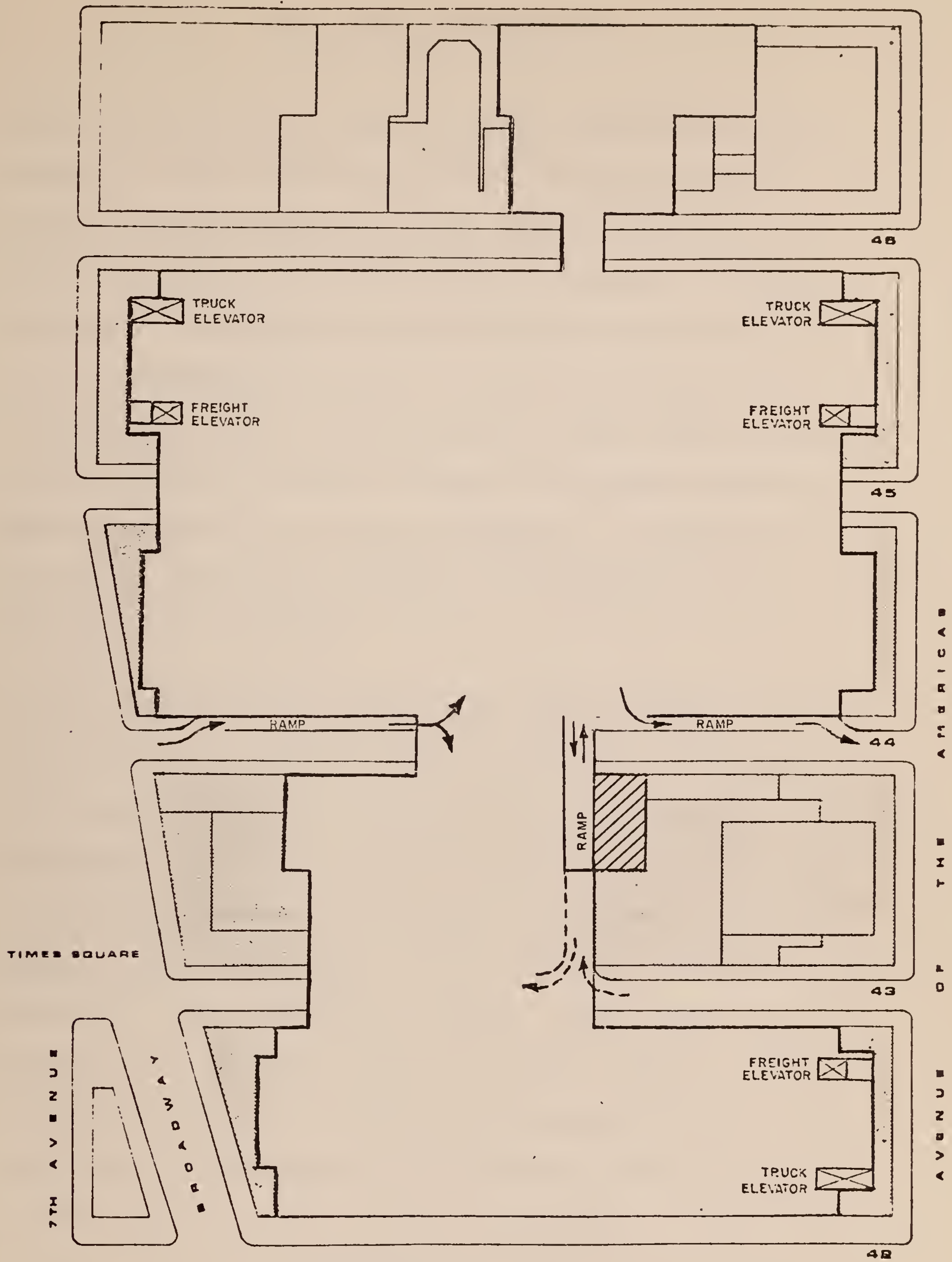
JULY 1977

FIGURE 7

Scheme 3 (Figure 8) - This plan includes two one-way ramps running parallel to 44th Street and one two-way ramp intersecting 43rd Street at right angles. The one-way ramps could be adjacent to the street with the sidewalk offset to the inside; or the ramps could cross the sidewalk and be incorporated in the building. Many cities successfully use systems of external ramps with offset sidewalks for parking garage access. Although, the system could be acceptable in this case it may be difficult to implement in Midtown Manhattan.

The two-way ramp included in this plan provides access to and from a westbound street. However, this third ramp would reduce the floor area of the southern exhibit area to about 180,000 square feet.


TRUCK ELEVATOR
FREIGHT ELEVATOR
TRUCK ELEVATOR
FREIGHT ELEVATOR
46
45
RAMP
RAMP
44
RAMP
43
FREIGHT ELEVATOR
TRUCK ELEVATOR
42
TIMES SQUARE
7TH AVENUE
BROADWAY
AVENUE OF THE AMERICAS

PROPOSED
EXHIBIT LEVEL ACCESS: SCHEME 3

TIMES SQUARE CONVENTION CENTER

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FIGURE 8

VI. TRUCK MARSHALLING

Marshalling areas are used to store vehicles that have arrived at their destination prior to their optimum arrival time or which are being held in storage or readiness prior to the time they are needed. Transit companies, for example, invariably use marshalling yards to store buses prior to the a.m. and p.m. peak hours. A marshalling area for a convention center would be used to store trucks that have arrived with exhibit material before the center is ready to accept it. It would also be used to hold empty trailers and detached tractors during layover periods.

It is unreasonable to assume that exhibits being shipped from distant parts of the country will arrive randomly at the convention center on trucks that must wait on site until the appropriate set-up time. In fact, convention centers in most large cities work closely with a small number of drayage firms that handle all the details on behalf of the exhibitor. The exhibitors arrange to have their displays shipped by or to their selected drayage company. The drayage company dispatcher contacts the manager of the convention center to determine the appropriate delivery and pickup times for the exhibits that his company is handling. As a result storage yards available to the drayage companies become the marshalling areas for most exhibits.

Some exhibitors may choose not to contract with local drayage companies. In these cases, the truck drivers generally telephone the destination shortly after entering the metropolitan area to receive arrival instructions. These instructions may include a layover in a marshalling area; but this area does not have to belong to the operator of the convention center, and it certainly does not have to be adjacent to the center. Many large city convention centers such as Cobo Hall in Detroit and Hynes Veterans Auditorium in Boston leave the marshalling problems entirely to the drayage firms and the exhibitors. Others such as McCormick Place in Chicago provide a marshalling area at some outlying location that is reasonably accessible to the exhibition facility. In any event, it does not appear to be a wise planning decision to include a large area for storing unused trucks anyplace in Manhattan. Appendix A of this report contains telephone log reports of discussions with convention center operating personnel in this regard.

VII. CONCLUSIONS

From our analysis we conclude that the proposed Times Square site between 6th and 7th Avenues which we have examined in detail could be designed to work adequately and could be far superior to any other location in Manhattan for a New York City Convention and Exhibition Center. Subject to further detailed analysis, we believe the same to be true of the alternative Times Square site between 7th and 8th avenues.

It is quite clear that the truck generation for any location is not sufficient to severely impact the north-south avenues nor the east-west crosstown streets which would be utilized. We concede that crosstown travel is difficult, but this is true throughout all of Manhattan and it affects any site which might be selected. By avoiding very difficult areas such as the financial district, Greenwich Village and the garment and produce districts, the Times Square site will operate as well as can be expected anywhere in Manhattan.

As for details of the site its-self, we agree that direct access to the exhibition floor, particularly for those trailers which carry self contained exhibits, is a must. We have shown alternate schemes which could be developed. We recognize that additional construction cost and loss

of floor space is involved in these schemes, but we believe that is a necessary cost of developing a location such as those offered.

We believe that the Times Square site, with its great concentration of hotels, restaurants, and other related amenities, best offers those advantages attract and serve visitors and which make a Manhattan Island convention center different from any other place in the United States.

For residents of the Metropolitan area who can be expected to be attracted to events such as home, boat, automobile, and appliance shows, proximity to public transportation is a must, while for visitors who come from distances outside the region, the ability to move to and from the convention center is a significant advantage. The Times Square site, by its proximity to the most extensive public transportation system in the country, provides this advantage better than any other site in Manhattan or anywhere else in the country. If land assembly and construction costs can be made to fit development and use potentials, visitation and access factors favor this site.

APPENDIX 1
LOG OF TELEPHONE CONVERSATIONS

July 15, 1977   New York Coliseum, New York City

Mr. James Torres, Sales Director at the Coliseum, indicated that set up for major trade shows extends from Wednesday to Saturday of the preceeding week. Most trucks arrive during first few days of set-up period. The last day or two is devoted to completing the set-up of exhibits that have been positioned on the exhibit floor. A large show could attract between 100 and 150 trucks in one day. The Coliseum has no marshalling area, and relies on elevators. Their large elevator can accommodate any truck that is allowed on the roads. Elevator can ascend to exhibit floor in three or four minutes. Approximately 12 trucks may be processed at one time. At most, 20 trucks may be waiting for processing.

July 15, 1977   McCormick Place, Chicago

The Manager of McCormick Place noted that trucks may either drive onto exhibit floor or be accomodated at loading docks. He strongly recommended against a system that relies totally on elevators, and suggested that more than one direct access point to the exhibit floor is almost a must at modern exhibit centers. McCormick Place has no onsite marshalling area, but they do have a large marshalling yard about one-half mile away that can store 300 trailers. The manager of the center communicates by telephone with the dispatcher at the marshalling yard to coordinate set-up and takedown activities. This system has worked well for them. A large show may attract 300 to 400 trucks during a three or four day period.

July 18, 1977   John B. Hynes-Veterans Auditorium, Boston

Mr. Hall, manager of Hynes Auditorium, indicated that they rely primarily on elevators. Their large elevators can make a round trip in less than six minutes. They have no marshalling area, and contract primarily with one drayage company. This drayage company coordinates the truck marshalling.

July 18, 1977 Cobo Hall, Detroit

Mr. Connally of Cobo Hall said that they rely mostly on direct truck access to the exhibit floor. They have a small parking lot adjacent to the Hall that is turned over to the exhibitors for the duration of the show. This lot can be, and occassionally is used for marshalling a small number of trucks. Most exhibitors contract with local drayage companies. These drayage companies in turn communicate with the exhibit floor manager who prescribes an appropriate arrival time.